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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/097,023	06/12/98	MCFADDEN	J 290252021800

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EXAMINER

KLINE, E

ART UNIT

PAPER NUMBER

3763

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DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/097,023

Applicant(s)

McFadden et al.

Examiner

Eric Kline

Group Art Unit
3763



☒ Responsive to communication(s) filed on Nov 8, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-22, 24-48, and 50-53 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-22, 24-48, and 50-53 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 13, 16, 18, 19, 20, 21, 24, 27, 31, 34, 40, 43, 45-48, 50, 51, 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius et al., U.S. Patent 5,338,295 in view of Andersen et al., U.S. Patent 5,674,276. Cornelius et al. discloses a catheter (10) comprising an elongate tubular member (12) having a proximal end, distal end, and a passageway defining a lumen (28) extending between the proximal and distal ends, said elongate tubular member comprising a braid (52) and an inner tubular liner (24) in coaxial relationship with the knit tubular member. Cornelius et al. discloses the braid which is woven in a "clothing weave"(column 2, lines 29-32). Webster's Ninth New Collegiate Dictionary defines weave: to form (cloth) by interlacing strands. Webster's defines knit: to form by interlacing yarn or thread in a series of connected loops with needles. Therefore a weaved braid is the same as a knit. Cornelius et al. further discloses an outer cover (22); a braided tubular member formed from metal wire (col 2, lines 29-30); a relatively stiff proximal segment and relatively flexible distal

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segment (col 3, lines 51-53); a knit tubular member comprised of a metal alloy/stainless steel (col 2, line 29) having a generally circular cross-sectional shape (column 2, line 31); wherein at least one of the inner tubular liner and the outer tubular cover are radiopaque (36); a knit tubular member that is generally not radially expandable; an inner proximal liner (24) and an outer proximal cover (26); a braid interposed between the inner proximal liner and the outer proximal cover (fig. 2); a knit tubular member extending into the proximal segment (fig. 2).

Cornelius does not disclose a knit tubular member being formed from a plurality of interlocking loops. Andersen et al. does teach a knit tubular member being formed from a plurality of interlocking loops (fig 1a). It would have been obvious to one of ordinary skill in the art to modify the invention of Cornelius to include the knit formed from a plurality of interlocking loops as taught by Andersen et al. so that the knit has more structural integrity, therefore having a stronger wall but allowing flexibility.

Claims 3-5, 7-9, 14-15, 17, 22, 25-26, 32, 33, 35-37, 41, 42, 44, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius et al. in view of Andersen et al., and further in view of Samson, U.S. Patent 5,702,373. Cornelius discloses all of applicant claims with the exception of a the knit tubular member comprised of super elastic alloy, nickel-titanium alloy, nitinol, platinum alloy, non-metallic material, or polymeric material; wherein the wire has a diameter of about .3 mil - 1.5 mil.; comprises a first strand made from a first material and a second made from a second material; an outer tubular cover comprised of a material selected from the

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group consisting of polyimide, polyamide, polyethylene, polypropylene, polyvinyl chloride, fluoropolymers including PTFE, FEP, Nylon, polyether block amide, vinylidene fluoride, and their mixtures, alloys, copolymers, and block copolymers; an inner tubular liner comprised of a material selected from the group consisting of polyethylene, fluoropolymer, Nylon, polyether block amide, polyvinyl chloride (PVC), ethyl vinyl acetate (EVA), polyethylene terephthalate (PET), and their mixtures, alloys, and copolymers; and a coil interposed between the inner proximal liner and the outer proximal cover. Samson discloses a knit tubular member comprising of super elastic alloy (column 7, line 64), nickel-titanium alloy (column 8, lines 10-12), nitinol (column 8, lines 10-12), platinum alloy (column 12, lines 6-7), non-metallic material (column 12, lines 10-12), polymeric material (column 12, lines 10-12); wherein the wire has a diameter of about .3 mil - 1.5 mil (column 11, lines 60-62); comprises a first strand made from a first material and a second made from a second material (column 11, lines 28-32); an outer tubular cover comprised of polyethylene (column 10, line 36), polyvinyl chloride (column 10, line 49); and an inner tubular liner comprised of polyethylene (column 10, line 27), PVC (column 10, line 27), EVA (column 10, line 28), PET (column 10, line 28); and a coil(282) interposed between the inner proximal liner and the outer proximal cover. It would have been obvious to one having ordinary skill in the art to modify the catheter of Cornelius et al. in view of Andersen et al. to use the above mentioned materials and diameter of wire as taught by Samson to help prevent kinking of the catheter tube.

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Claims 10-12, 28-30, 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius et al. in view of Andersen et al., and further in view of Samson as applied to claims 3-5, 7-9, 14-15, 17, 22, 25-27, 32-37, 41, 42, 44 above, and further in view of Samson et al., US Patent 5,549,109. Cornelius et al. in view of Samson teach all the elements of applicant's claims with the exception of a knit tubular member comprised of a multi filament wire. Samson et al. discloses multi filament tubes(302) that are woven (column 9, 65-67). It would have been obvious to one having ordinary skill in the art to modify the catheter of Cornelius et al. in view of Andersen et al., and further in view of Samson to use a multi filament wire as taught by Samson et al. to improve kinking resistance Samson discloses the use of stainless steel, platinum and nitinol as the material for the wire. Therefore it would have also been obvious to use stainless steel and platinum or material selected from the group consisting of stainless steel, platinum, and nitinol as the material for the multi filament wire to improve kinking resistance.

Response to Arguments

Applicant's arguments filed November 8, 1999 have been fully considered but they are not persuasive. The knit member of Anderson is positioned on the outside of a catheter, and it would have been obvious to one of ordinary skill to place this knit in a middle layer of a catheter as the knit member would have performed the same strengthening properties on the outside of the catheter but would be more secure in between layers. Furthermore, the catheter of Cornelius et

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al. already has a knit member. It would have been obvious to one of ordinary skill to replace the knit of Cornelius with the knit of Andersen et al.

Everything is radially expandable and contractible. A steel pipe expands radially to some extent when heat is applied, therefore the knit member of applicant's claims will expand. Furthermore, examiner asserts that the structure of the knit interlocking loops of Andersen et al. are the same as applicant's. Placing an outer layer on the loops of Andersen would cause the knit member so that it does not increase in diameter more than about 5% when an outwardly directed radial force is applied to the inner surface of the knit member.

Conclusion


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Kline whose telephone number is (703) 305-7350. The examiner can normally be reached on Monday-Thursday from 8:00 to 5:30. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wynn Coggins, can be reached on (703) 308-1344.


WYNN WOOD COGGINS
SUPERVISORY PATENT EXAMINER

Eric Kline



January 20, 2000